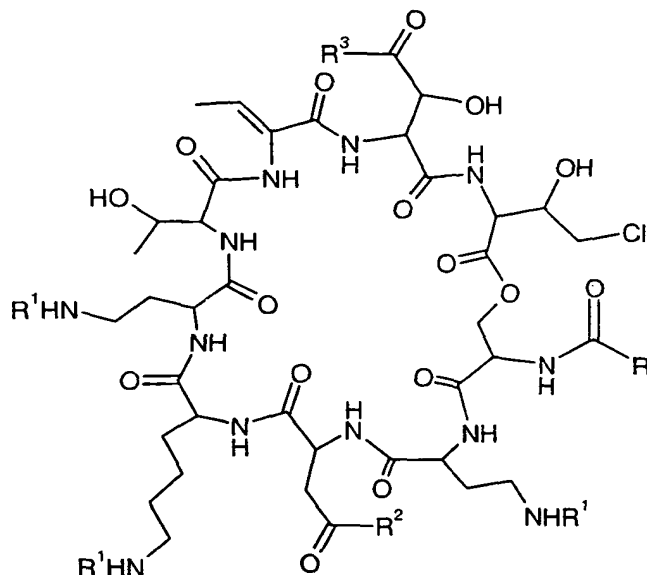


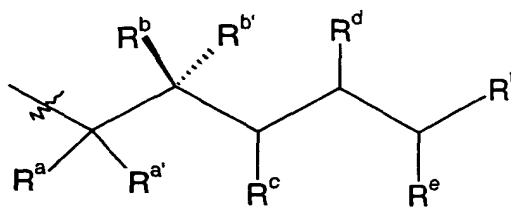
WE CLAIM:

1. A pseudomycin prodrug having the following structure:



5 wherein

R is



where

- 10 R^a and $R^{a'}$ are independently hydrogen or methyl, or either R^a or $R^{a'}$ is alkyl amino, taken together with R^b or $R^{b'}$ forms a six-membered cycloalkyl ring, a six-membered aromatic ring or a

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double bond, or taken together with R^c forms a six-membered aromatic ring;

R^b and R^{b'} are independently hydrogen, halogen, or methyl, or either R^b or R^{b'} is amino, alkylamino, α-acetoacetate, methoxy, or hydroxy;

R^c is hydrogen, hydroxy, C₁-C₄ alkoxy,

hydroxyalkoxy, or taken together with R^c forms a 6-membered aromatic ring or C₃-C₆ cycloalkyl ring;

R^d is hydrogen;

R^e is hydrogen, or taken together with R^f is

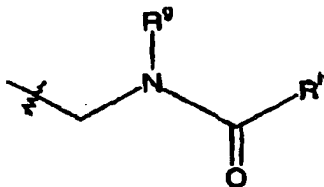
a six-membered aromatic ring, C₅-C₁₄ alkoxy

substituted six-membered aromatic ring, or C₅-C₁₄

alkyl substituted six-membered aromatic ring, and

R^f is C₈-C₁₈ alkyl, C₅-C₁₁ alkoxy or biphenyl;

R is

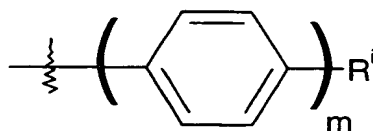


where

R^g is hydrogen, or C₁-C₁₃ alkyl, and

R^h is C₁-C₁₅ alkyl, C₄-C₁₅ alkoxy, (C₁-C₁₀ alkyl)phenyl, -(CH₂)_n-aryl, or -(CH₂)_n-(C₅-C₆ cycloalkyl), where n = 1 or 2; or

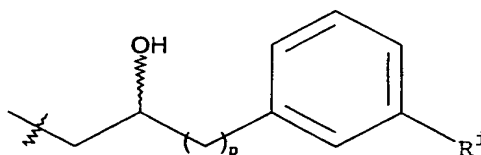
R is



where

R^i is a hydrogen, halogen, or C_5 - C_8 alkoxy,
and m is 1, 2 or 3;

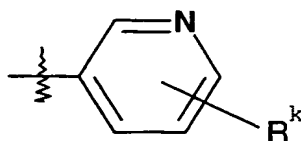
5 R is



where

R^j is C_5 - C_{14} alkoxy or C_5 - C_{14} alkyl, and
 $p = 0, 1$ or 2 ;

10 R is



where

R^k is C_5 - C_{14} alkoxy; or

R is $-(CH_2)-NR^m-(C_{13}-C_{18} \text{ alkyl})$, where R^m is H, $-CH_3$ or
15 $-C(O)CH_3$;

R^1 is independently hydrogen, an acyloxymethylene-1,3-dioxolen-2-one, or an acyloxymethylenecarboxylate, provided

that at least one R^1 is an acyloxymethylene-1,3-dioxolen-2-one or an acyloxymethylenecarboxylate;

R^2 and R^3 are independently $-OR^{2a}$ or $-N(R^{2b})(R^{2c})$,

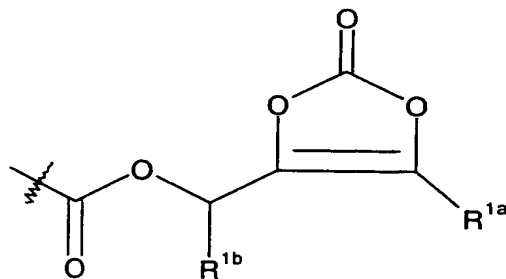
where

5 R^{2a} and R^{2b} are independently hydrogen, C_1 - C_{10} alkyl, C_3 - C_6 cycloalkyl, hydroxy(C_1 - C_{10})alkyl, alkoxy(C_1 - C_{10})alkyl, C_2 - C_{10} alkenyl, amino(C_1 - C_{10})alkyl, mono- or di-alkylamino(C_1 - C_{10})alkyl, aryl(C_1 - C_{10})alkyl, heteroaryl(C_1 - C_{10})alkyl, cycloheteroalkyl(C_1 - C_{10})alkyl, or

10 R^{2b} is an alkyl carboxylate residue of an aminoacid alkyl ester and R^{2c} is hydrogen or C_1 - C_6 alkyl; and

pharmaceutically acceptable salts and solvates thereof.

15 2. The prodrug of Claim 1 wherein said acyloxymethylene-1,3-dioxolen-2-one is represented by structure 1(a):

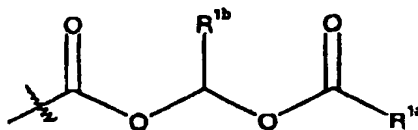


1(a)

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where R^{1a} is C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, benzyl, or aryl and
 R^{1b} is hydrogen or methyl.

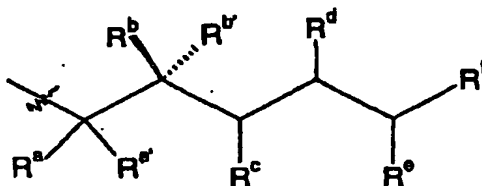
3. The prodrug of Claim 1 wherein said
 5 acyloxymethylenecarboxylate is represented by structure
 1(b):



1(b)

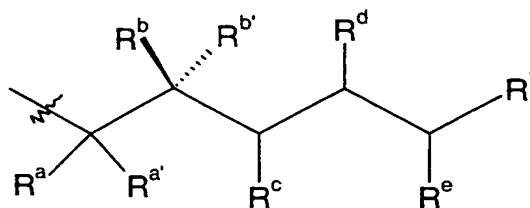
where R^{1a} is C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, benzyl, or aryl and
 10 R^{1b} is hydrogen or methyl.

4. The prodrug of Claim 2 wherein R is represented by
 the structure



15 where $R^{b'}$ is hydroxy, R^a , $R^{a'}$, R^b , R^c , R^d , and R^e are all
 hydrogen, and R^f is n-octyl.

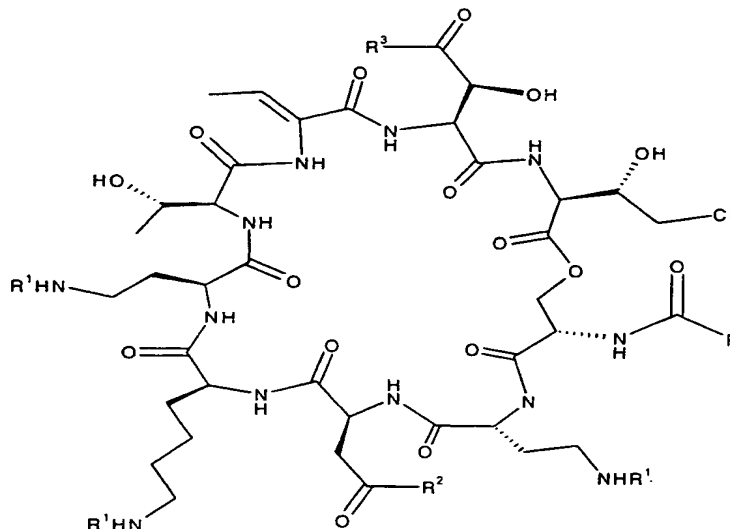
5. The prodrug of Claim 3 wherein R is represented by
 the structure



where $R^{b'}$ is hydroxy, R^a , $R^{a'}$, R^b , R^c , R^d , and R^e are all hydrogen, and R^f is n-octyl.

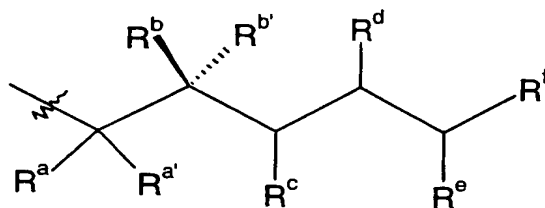
- 5 6. The prodrug of Claim 1 wherein said alkyl carboxylate residue of an aminoacid alkyl ester is represented by $-\text{CH}_2\text{CO}_2\text{CH}_3$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}(\text{CH}_3)_2$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}(\text{phenyl})$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2\text{OH}$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2(p\text{-hydroxyphenyl})$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2\text{SH}$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2(\text{CH}_2)_3\text{NH}_2$,
 10 $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2(4\text{-imidazole})$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2(5\text{-imidazole})$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2\text{CO}_2\text{CH}_3$, or $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2\text{CO}_2\text{NH}_2$.

7. A pseudomycin prodrug having the following structure:



wherein

R is



where

R^a and $R^{a'}$ are independently hydrogen or methyl, or either R^a or $R^{a'}$ is alkyl amino, taken together with R^b or $R^{b'}$ forms a six-membered cycloalkyl ring, a six-membered aromatic ring or a double bond, or taken together with R^c forms a six-membered aromatic ring;

R^b and $R^{b'}$ are independently hydrogen, halogen, or methyl, or either R^b or $R^{b'}$ is amino, alkylamino, α -acetoacetate, methoxy, or hydroxy;

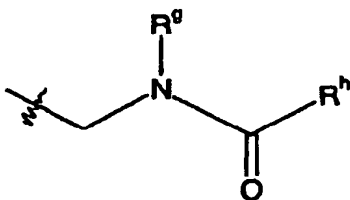
R^c is hydrogen, hydroxy, C_1-C_4 alkoxy, hydroxyalkoxy, or taken together with R^e forms a 6-membered aromatic ring or C_5-C_6 cycloalkyl ring;

R^d is hydrogen;

5 R^e is hydrogen, or taken together with R^f is a six-membered aromatic ring, C_5-C_{14} alkoxy substituted six-membered aromatic ring, or C_5-C_{14} alkyl substituted six-membered aromatic ring, and

R^f is C_6-C_{18} alkyl, C_5-C_{11} alkoxy or biphenyl;

10 R is

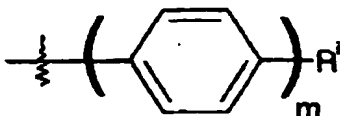


where

R^g is hydrogen, or C_1-C_{13} alkyl, and

15 R^h is C_1-C_{15} alkyl, C_4-C_{15} alkoxy, $(C_1-C_{10}$ alkyl)phenyl, $-(CH_2)_n$ -aryl, or $-(CH_2)_n$ -(C_5-C_6 cycloalkyl), where $n = 1$ or 2 ; or

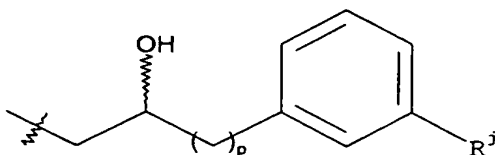
R is



wher

R^i is a hydrogen, halogen, or C_5 - C_8 alkoxy,
and m is 1, 2 or 3;

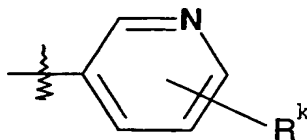
R is



5 where

R^j is C_5 - C_{14} alkoxy or C_5 - C_{14} alkyl, and
 $p = 0, 1$ or 2 ;

R is



10 where

R^k is C_5 - C_{14} alkoxy; or

R is $-(CH_2)-NR^m-(C_{13}-C_{18} \text{ alkyl})$, where R^m is H, $-CH_3$ or
 $-C(O)CH_3$;

R^1 is independently hydrogen, an acyloxymethylene-1,3-
15 dioxolen-2-one, or an acyloxymethylenecarboxylate, provided
that at least one R^1 is an acyloxymethylene-1,3-dioxolen-2-
one or an acyloxymethylenecarboxylate;

R^2 and R^3 are independently $-OR^{2a}$ or $-N(R^{2b})(R^{2c})$,

where

20 R^{2a} and R^{2b} are independently hydrogen, C_1 - C_{10}
alkyl, C_3 - C_6 cycloalkyl, hydroxy(C_1 - C_{10})alkyl,

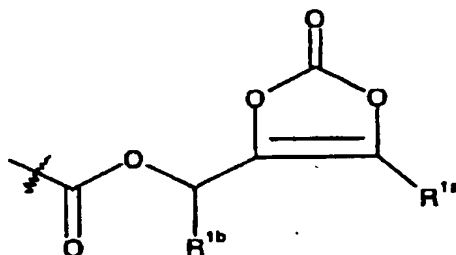
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alkoxy(C₁-C₁₀)alkyl, C₂-C₁₀ alkenyl, amino(C₁-C₁₀)alkyl, mono- or di-alkylamino(C₁-C₁₀)alkyl, aryl(C₁-C₁₀)alkyl, heteroaryl(C₁-C₁₀)alkyl, cycloheteroalkyl(C₁-C₁₀)alkyl, or

5 R^{2b} is an alkyl carboxylate residue of an aminoacid alkyl ester and R^{2c} is hydrogen or C₁-C₆ alkyl; and

pharmaceutically acceptable salts and solvates thereof.

10 8. The prodrug of Claim 7 wherein said acyloxymethylene-1,3-dioxolen-2-one is represented by structure 1(a):

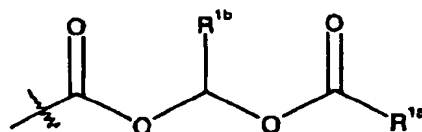


1(a)

15 where R^{1a} is C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, benzyl, or aryl and R^{1b} is hydrogen or methyl.

9. The prodrug of Claim 7 wherein said acyloxymethylenecarboxylate is represented by structure
20 1(b):

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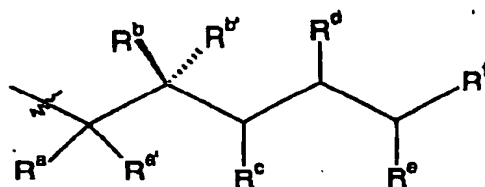


1(b)

where R^{1a} is C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, benzyl, or aryl and R^{1b} is hydrogen or methyl.

5

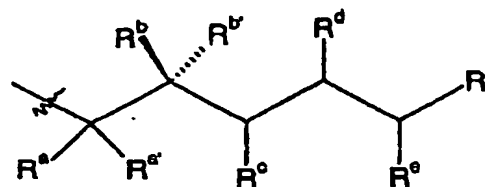
10. The prodrug of Claim 8 wherein R is represented by the structure



where $R^{b'}$ is hydroxy, R^a , $R^{a'}$, R^b , R^c , R^d , and R^e are all

10 hydrogen, and R^f is n-octyl.

11. The prodrug of Claim 9 wherein R is represented by the structure



15 where $R^{b'}$ is hydroxy, R^a , $R^{a'}$, R^b , R^c , R^d , and R^e are all hydrogen, and R^f is n-octyl.

12. The prodrug of Claim 7 wherein said alkyl carboxylate residue of an aminoacid alkyl ester is represented by $-\text{CH}_2\text{CO}_2\text{CH}_3$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}(\text{CH}_3)_2$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}(\text{phenyl})$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2\text{OH}$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2(p\text{-hydroxyphenyl})$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2\text{SH}$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2(\text{CH}_2)_3\text{NH}_2$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2(4\text{-imidazole})$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2(5\text{-imidazole})$, $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2\text{CO}_2\text{CH}_3$, or $-\text{CH}(\text{CO}_2\text{CH}_3)\text{CH}_2\text{CO}_2\text{NH}_2$.

13. The use of a compound as claimed in any one of the preceding claims in the preparation of medicaments for use in combating either systemic fungal infections or fungal skin infections.

14. A pharmaceutical formulation comprising a pseudomycin prodrug of Claim 1 or 7 and a pharmaceutically acceptable carrier.

15. A medicament for treating an antifungal infection in an animal wherein said medicament comprises a compound of Claim 1 or 7.

16. A method for treating an antifungal infection in an animal in need thereof, comprising administering to said animal a pseudomycin prodrug of Claim 7, 8, 9, 10 or 11.